

**Biological activity, chemical profiling and molecular docking of tissue extracts of the sea snail *Trochus erithreus***

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**SUPPLEMENTARY MATERIAL**

**Table 1S.** Chemical compositions of *Te*-Acetone extract

No.	R <sub>t</sub>	Area% <sup>a</sup>	M.W.	M.F.	Identified compounds	Class/Category
1	5.11	1.88	86	C <sub>5</sub> H <sub>10</sub> O	Propane, 2-(ethenylxy)	Aliphatic ether
2	9.24	0.70	136	C <sub>10</sub> H <sub>16</sub>	l-Limonene	Monoterpenes
3	19.61	1.01	226	C <sub>14</sub> H <sub>26</sub> O <sub>2</sub>	Z9-Dodecenyl acetate	Fatty alcohol esters
4	20.87	7.89	204	C <sub>15</sub> H <sub>24</sub>	(E)- $\alpha$ -Farnesene	Sesquiterpenoids

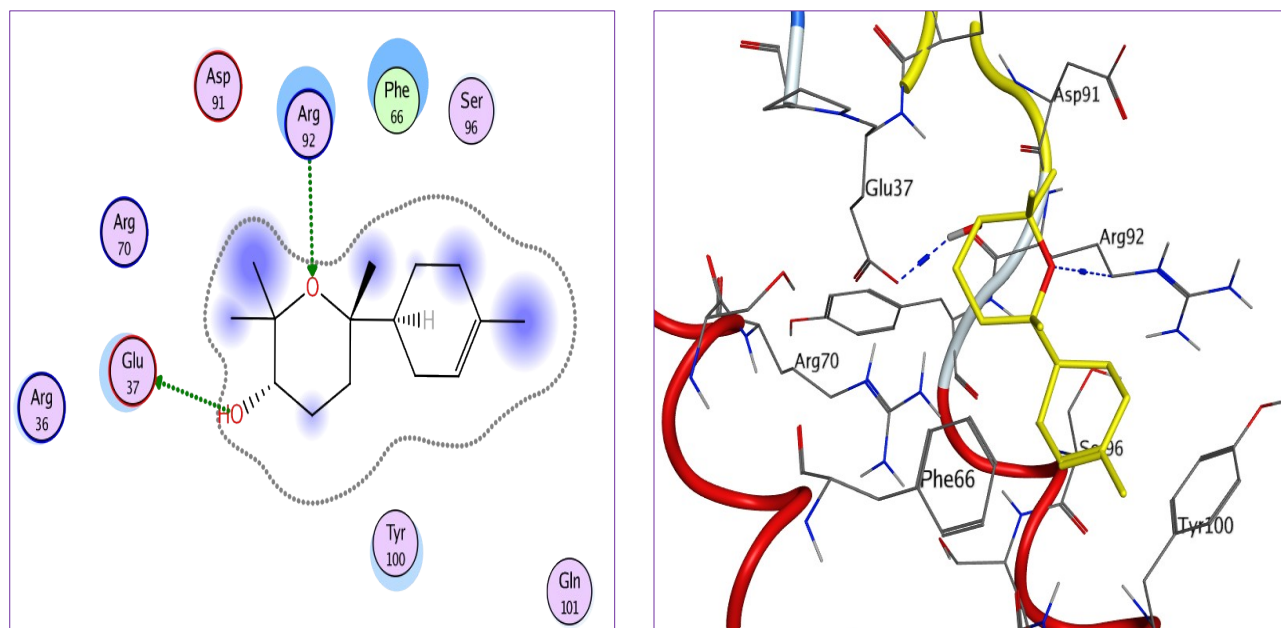
5	21.48	0.57	204	C <sub>15</sub> H <sub>24</sub>	Germacrene D	Sesquiterpenoids
6	22.12	0.55	154	C <sub>10</sub> H <sub>18</sub> O	Cis-Myrtanol	Bicyclic monoterpenoids
7	22.40	0.95	206	C <sub>16</sub> H <sub>14</sub>	15-methyltricyclo[6.5.2(13,14),0(7,15)] pentadeca-1,3,5,7,9,11,13-heptene	Cyclic alkane derivatives
8	23.48	1.17	182	C <sub>12</sub> H <sub>22</sub> O	3-Dodecen-1-al	Medium-chain aldehydes
9	23.94	0.59	200	C <sub>13</sub> H <sub>28</sub> O	Tridecanol	Long-chain fatty alcohol
10	25.22	0.52	204	C <sub>15</sub> H <sub>24</sub>	α-copaene	Sesquiterpenoids
11	25.50	2.99	238	C <sub>15</sub> H <sub>26</sub> O <sub>2</sub>	α-Bisabolol-oxide-B	Sesquiterpenoids
12	25.77	1.01	252	C <sub>17</sub> H <sub>32</sub> O	8-Hexadecenal, 14-methyl, (Z)	Fatty aldehydes
13	26.14	2.92	236	C <sub>15</sub> H <sub>24</sub> O <sub>2</sub>	Bisabolone oxide	Sesquiterpenoids
14	27.19	0.84	184	C <sub>14</sub> H <sub>16</sub>	Chamazulene	Sesquiterpenoids
15	27.52	24.63	238	C <sub>15</sub> H <sub>26</sub> O <sub>2</sub>	Bisabolol oxide A	Sesquiterpenoids
16	29.43	1.73	146	C <sub>10</sub> H <sub>10</sub> O	Methylcinnamic aldehyde	Cinnamaldehydes
17	29.81	1.64	226	C <sub>15</sub> H <sub>14</sub> S	trans-Cinnamyl phenyl sulfide	Cinnamaldehydes derivatives
18	30.34	1.32	200	C <sub>13</sub> H <sub>12</sub> O <sub>2</sub>	1,6-Dioxaspiro[4.4]non-3-ene,2-(2,4-hexadiynylidene)	Alkyne derivatives
19	30.96	1.47	270	C <sub>17</sub> H <sub>34</sub> O <sub>2</sub>	Pentadecanoic acid, 14-methyl, methyl ester	Fatty acid esters
20	31.77	2.89	130	C <sub>10</sub> H <sub>10</sub>	Cycloprop[a]indene, 1,1a,6,6a-tetrahydro	Tetralins
21	31.89	4.21	210	C <sub>14</sub> H <sub>14</sub> N <sub>2</sub>	2-[1-(4-Cyano-1,2,3,4-tetrahydronaphthyl)] propanenitrile	Naphthalene derivatives
22	32.08	5.41	156	C <sub>12</sub> H <sub>12</sub>	Tricyclo[8.2.0.0(2,5)]dodeca-3,6,8,11-tetraene	Annulenes
23	32.23	2.46	284	C <sub>18</sub> H <sub>36</sub> O <sub>2</sub>	Hexadecanoic acid, ethyl ester	Fatty acid esters
24	33.62	0.84	156	C <sub>11</sub> H <sub>8</sub> O	Benzofulvene-8-carboxyldehyde	Aromatic aldehyde

**Table 1S Continue**

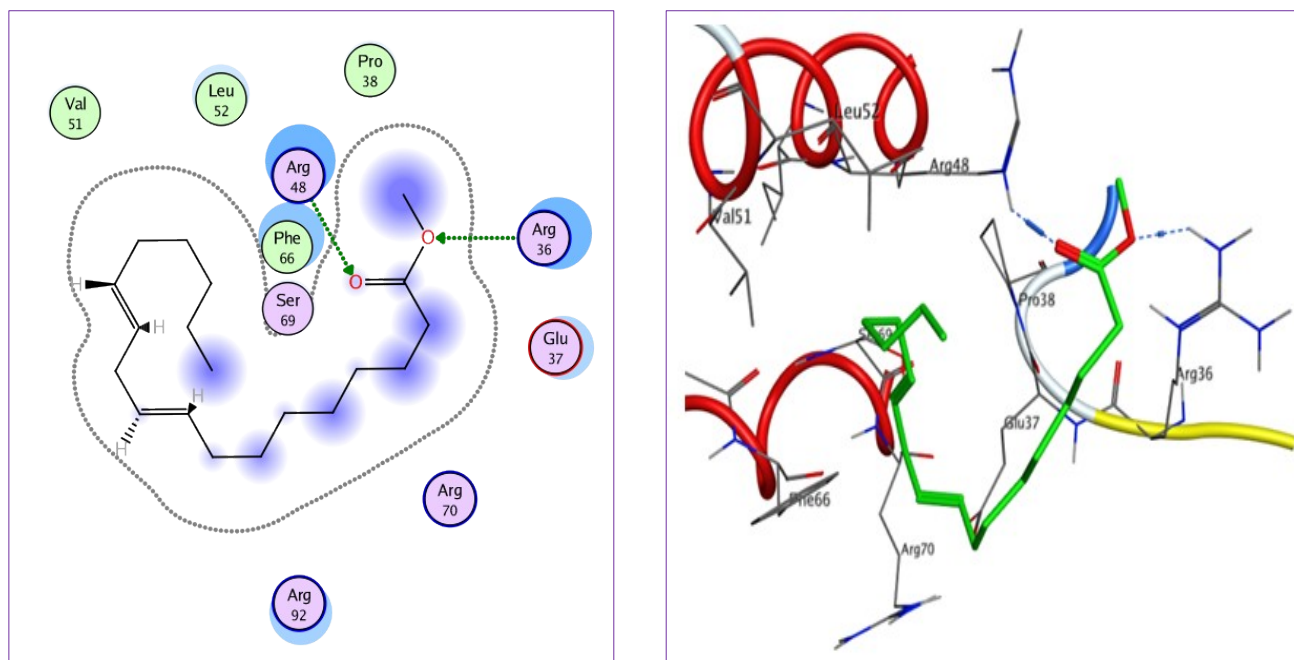
No.	R <sub>t</sub>	Area% <sup>a</sup>	M.W.	M.F.	Identified compounds	Class/Category
25	33.89	1.71	242	C <sub>16</sub> H <sub>34</sub> O	1-Hexadecanol	Fatty alcohol
26	34.09	3.47	294	C <sub>19</sub> H <sub>34</sub> O <sub>2</sub>	9,12-Octadecadienoic acid, methyl ester	Fatty acid esters
27	34.19	1.68	296	C <sub>19</sub> H <sub>36</sub> O <sub>2</sub>	9-Octadecenoic acid, methyl ester	Fatty acid esters

28	35.48	1.59	161	C <sub>10</sub> H <sub>11</sub> NO	N-Allylbenzamide	Benzamides
29	35.80	2.60	312	C <sub>20</sub> H <sub>40</sub> O <sub>2</sub>	Octadecanoic acid, ethyl ester	Fatty acid esters
30	36.40	0.57	280	C <sub>15</sub> H <sub>20</sub> O <sub>5</sub>	Tetraneurin A diol	Alcoholic compounds
31	36.87	0.78	160	C <sub>12</sub> H <sub>16</sub>	Benzene, (1,3-dimethyl-3-butenyl)	Benzene and substituted derivatives
32	36.92	1.40	176	C <sub>13</sub> H <sub>20</sub>	Benzene, (1-methylhexyl)	Benzene and substituted derivatives
33	37.21	0.88	206	C <sub>16</sub> H <sub>14</sub>	Benzene, 1,1'-(1,3-butadiene-1,4-diyl)bis	Diphenyl diene derivatives
34	37.80	0.79	168	C <sub>11</sub> H <sub>20</sub> O	trans-Undec-4-enal	Medium-chain aldehydes
35	37.89	0.61	282	C <sub>18</sub> H <sub>34</sub> O <sub>2</sub>	9-Octadecenoic acid (Z)	Fatty acids
36	38.50	3.03	210	C <sub>14</sub> H <sub>26</sub> O	3-Tetradecyn-1-ol	Unsaturated fatty alcohol
37	41.55	1.62	390	C <sub>24</sub> H <sub>38</sub> O <sub>4</sub>	1,2-Benzenedicarboxylic acid, diisooctyl ester	Benzoic acid esters
38	45.46	0.58	192	C <sub>14</sub> H <sub>24</sub>	1,5,9-Undecatriene, 2,6,10-trimethyl, (Z)	Acyclic monoterpenoids
39	46.07	0.62	214	C <sub>14</sub> H <sub>30</sub> O	Hexyl octyl ether	Long chain ether
40	46.46	0.77	446	C <sub>28</sub> H <sub>46</sub> O <sub>4</sub>	1,2-Benzenedicarboxylic acid, bis(8-methylnonyl) ester	Benzoic acid esters
41	46.65	0.71	368	C <sub>22</sub> H <sub>40</sub> O <sub>4</sub>	Cyclopropanedecanoic acid, à-(acetyloxy)-2-hexyl, methyl ester	Fatty acid methyl esters
42	46.88	0.84	446	C <sub>28</sub> H <sub>46</sub> O <sub>4</sub>	1,2-Benzenedicarboxylic acid, diisodecyl ester	Benzoic acid esters
43	47.06	0.80	446	C <sub>28</sub> H <sub>46</sub> O <sub>4</sub>	Phthalic acid, didecyl ester	Benzoic acid esters
44	47.27	0.64	418	C <sub>26</sub> H <sub>42</sub> O <sub>4</sub>	Phthalic acid, decyloct-3-ylester	Benzoic acid esters
45	47.68	0.65	292	C <sub>19</sub> H <sub>32</sub> O <sub>2</sub>	6,9,12-Octadecatrienoic acid, methyl ester	Fatty acid methyl esters
T% 96.53						

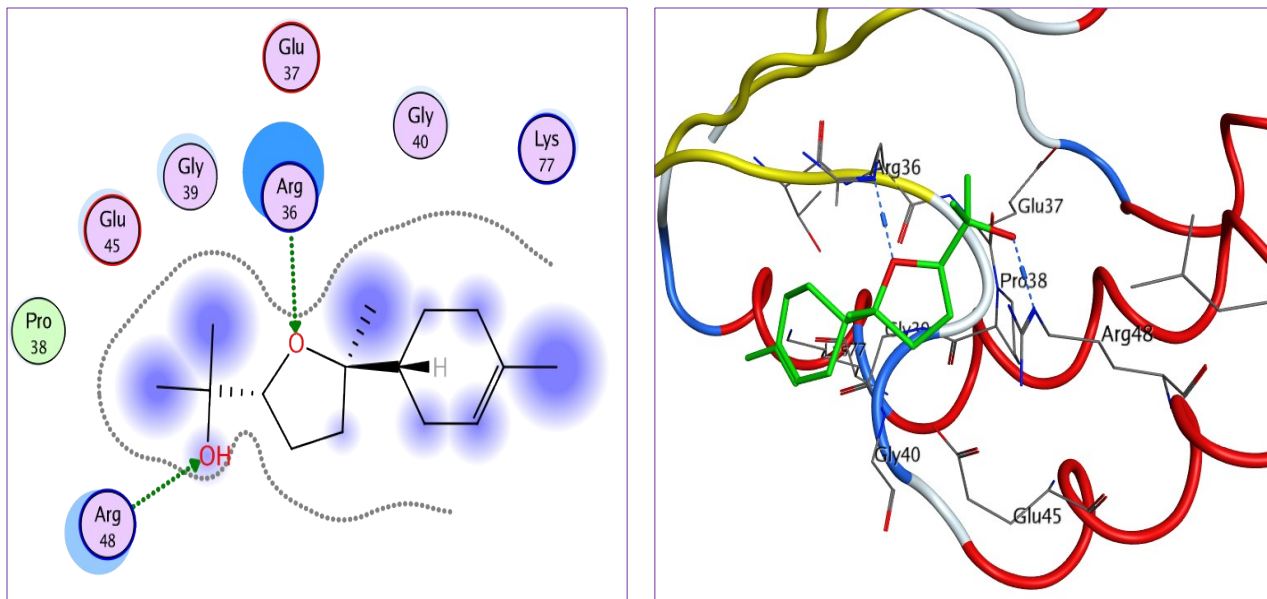
**Rt:** Retention time; **M.W.:** Molecular weight; **M.F.:** Molecular formula.



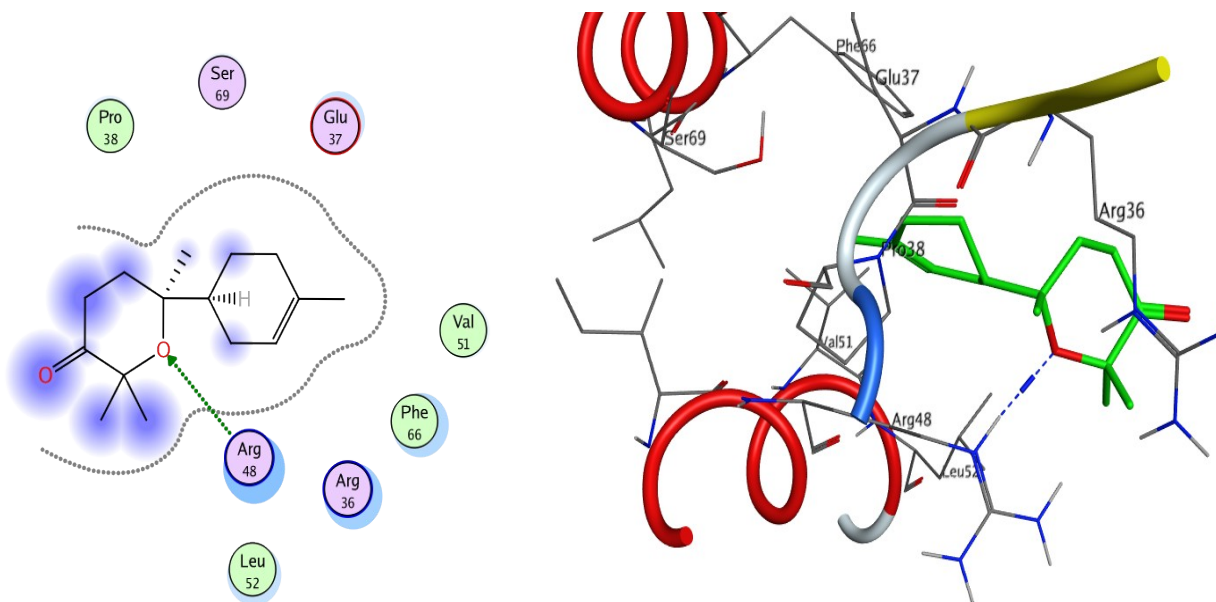
**Fig. 1S.** The two-dimensional and three-dimensional suggested binding modes of Bisabolol oxide within the binding pocket of TMK (PDB: 4QGG)



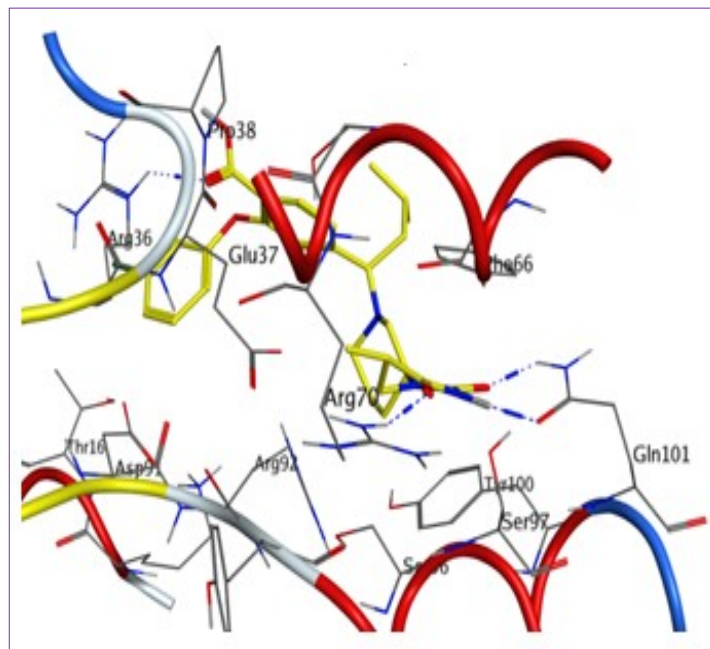
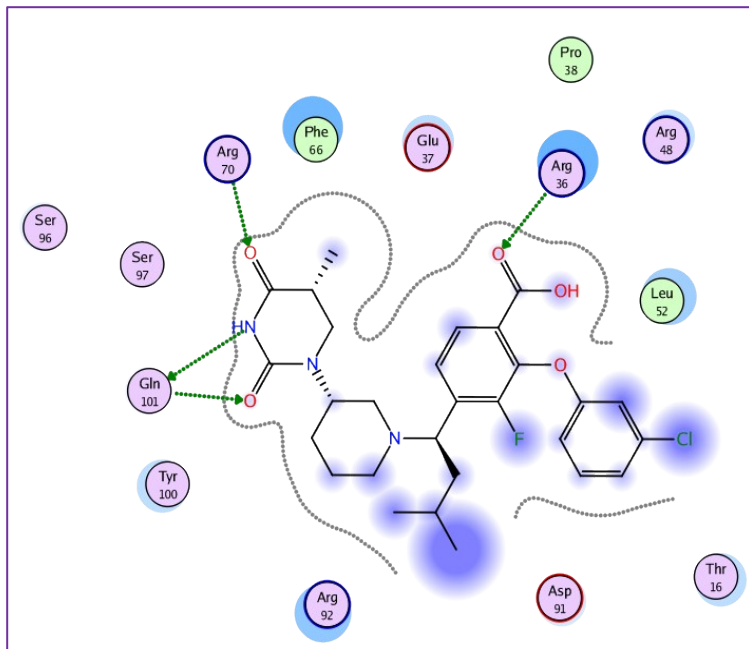
**Fig. 2S.** The two-dimensional and three-dimensional suggested binding modes of 9,12-Octadecadienoic acid, methyl ester within the binding pocket of TMK (PDB: 4QGG)



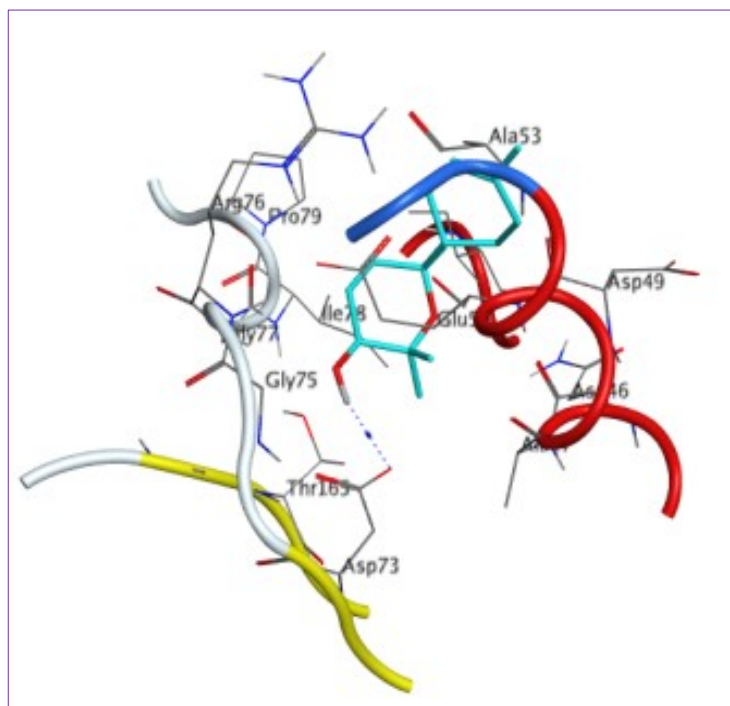
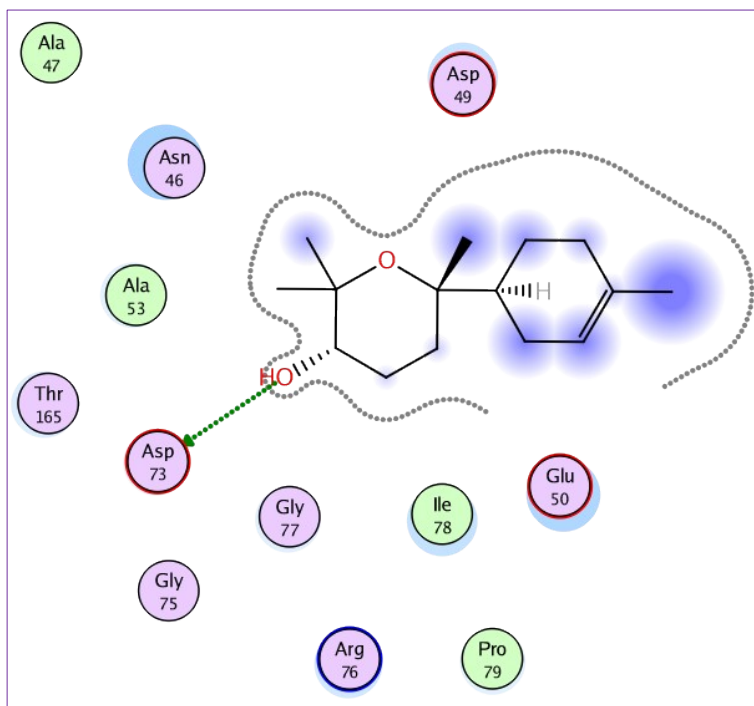
**Fig. 3S.** The two-dimensional and three-dimensional suggested binding modes of  $\alpha$ -Bisabolol-oxide-B within the binding pocket of TMK (PDB: 4QGG)



**Fig. 4S.** The two-dimensional and three-dimensional suggested binding modes of Bisabolone oxide within the binding pocket of TMK (PDB: 4QGG)

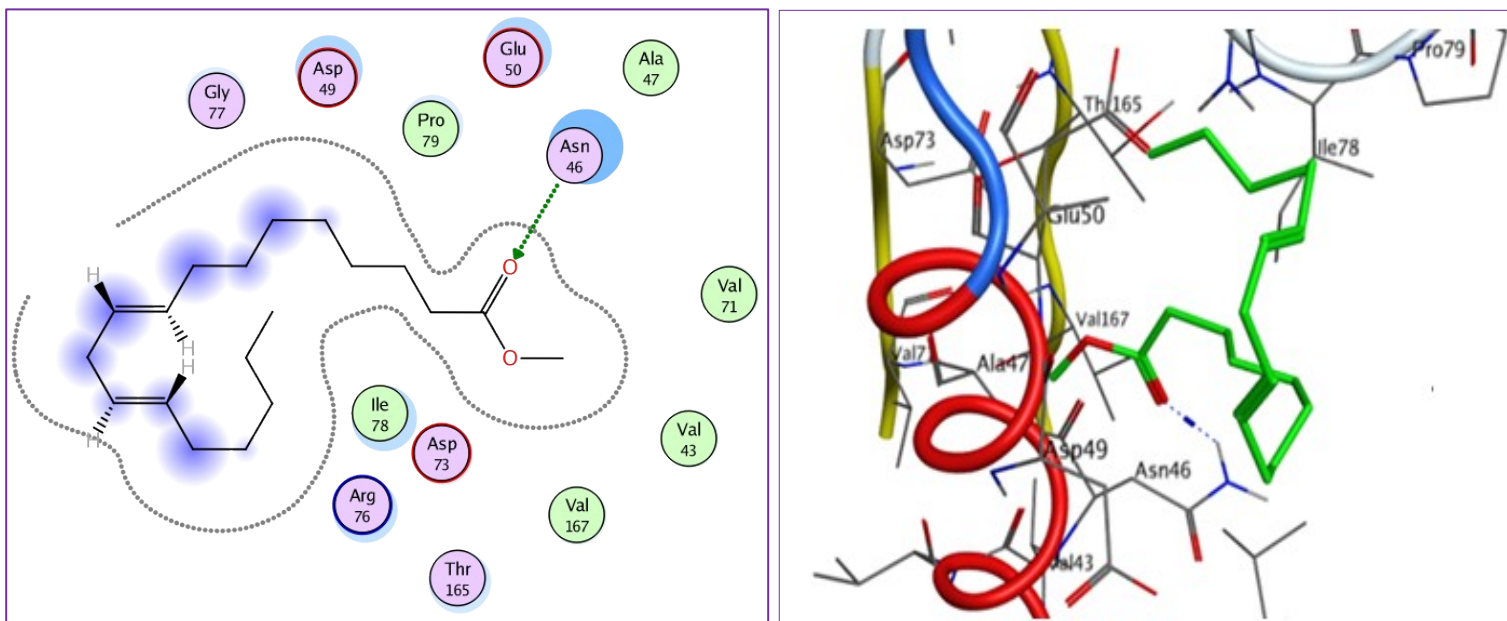


**Fig. 5S.** The two-dimensional and three-dimensional suggested binding modes of redocked ligand within the binding pocket of TMK (PDB: 4QGG)

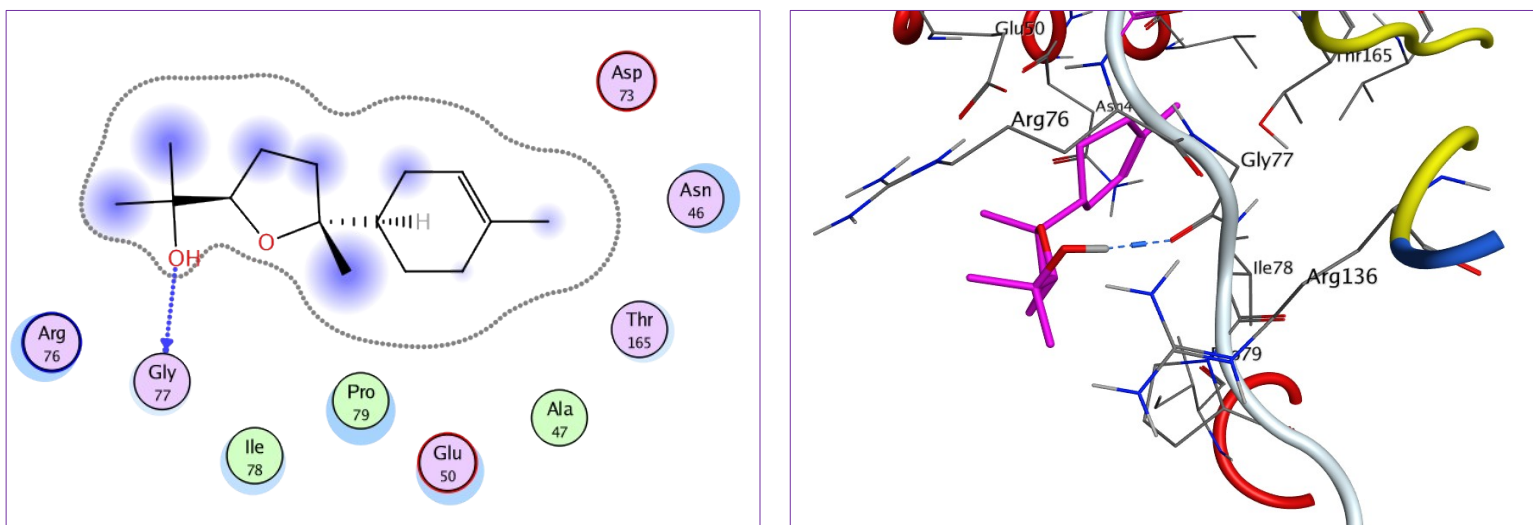


**Fig. 6S.** The two-dimensional and three-dimensional suggested binding modes of Bisabolol oxide A within the binding pocket of DNA gyrase B (PDB: 6F86).

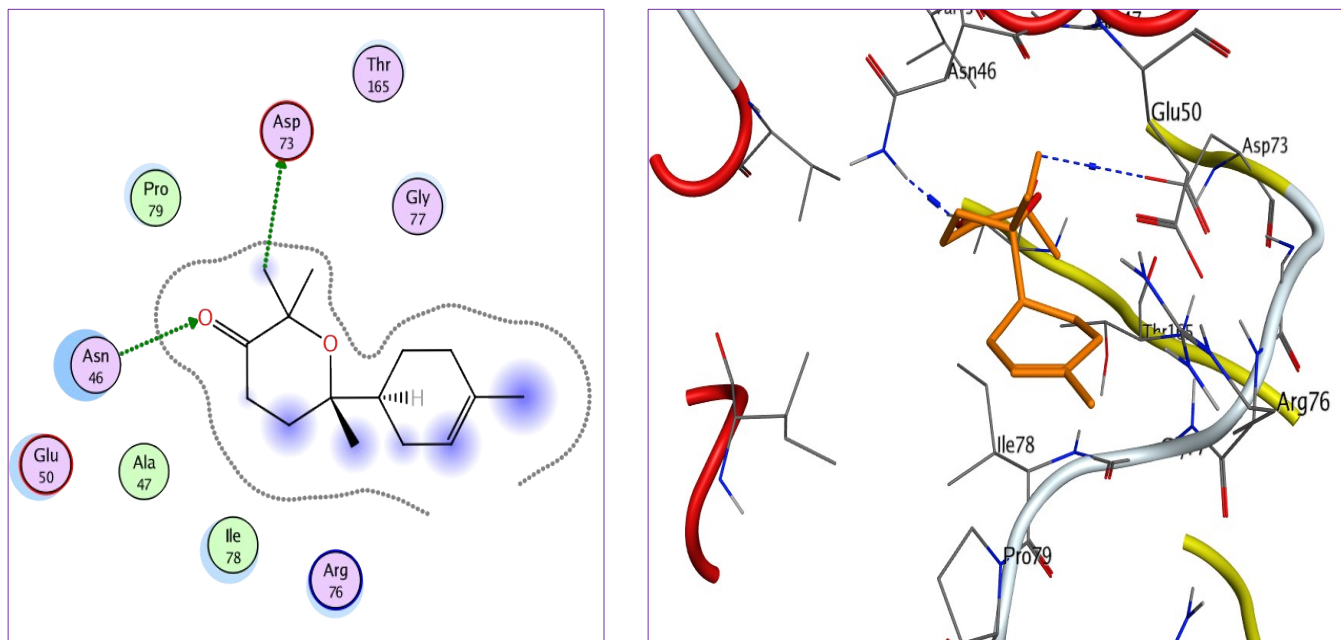




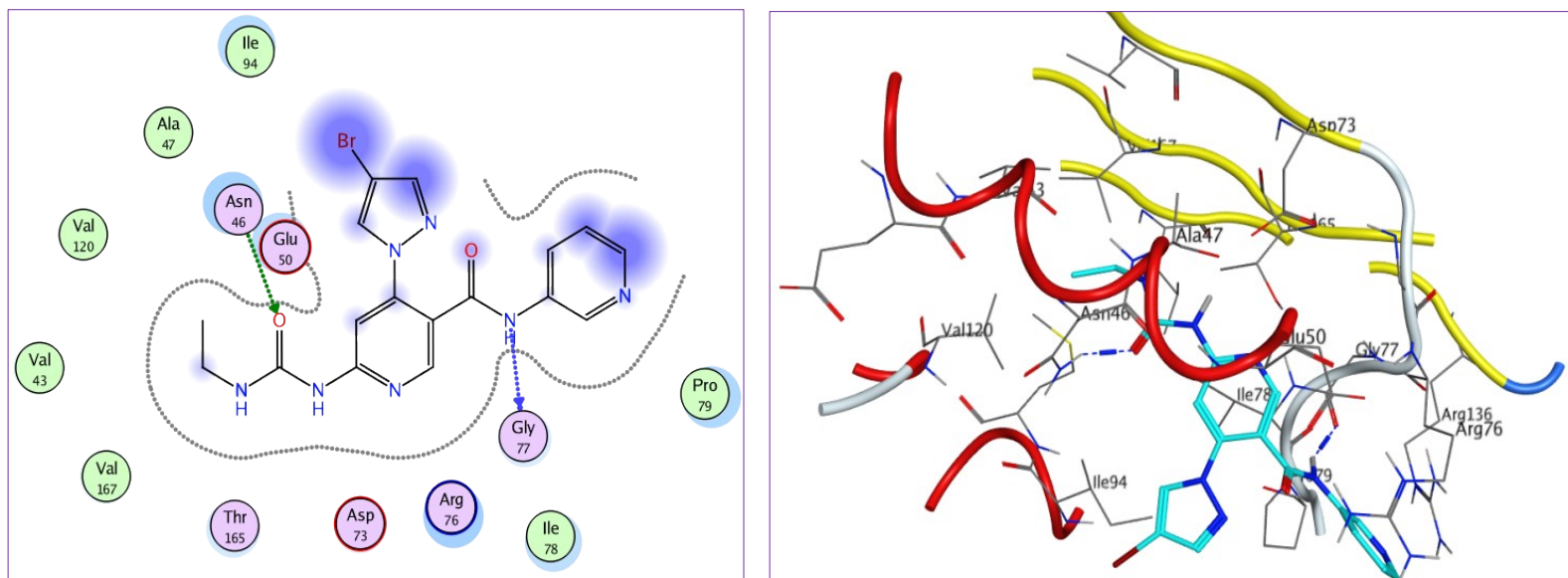
**Fig. 7S.** The two-dimensional and three-dimensional suggested binding modes of 9,12-Octadecadienoic acid, methyl ester within the binding pocket of DNA gyrase B (PDB: 6F86).



**Fig. 8S.** The two-dimensional and three-dimensional suggested binding modes of  $\alpha$ -Bisabolol-oxide-B within the binding pocket of DNA gyrase B (PDB: 6F86).

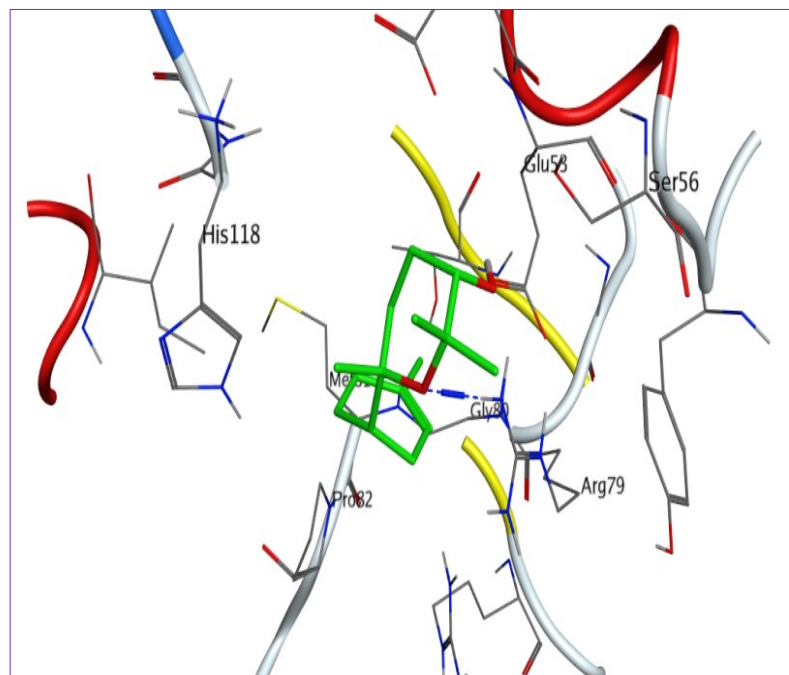
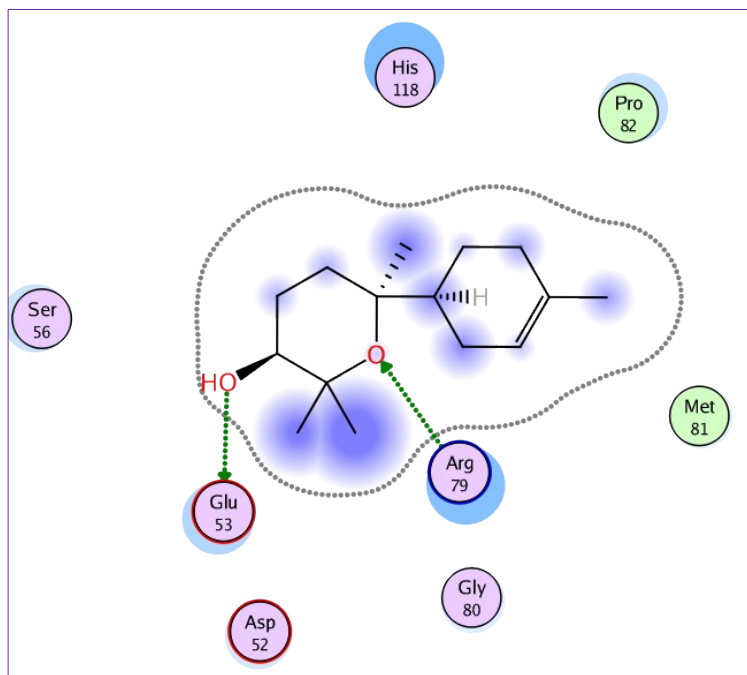


**Fig. 9S.** The two-dimensional and three-dimensional suggested binding modes of Bisabolone oxide within the binding pocket of DNA gyrase B (PDB: 6F86).

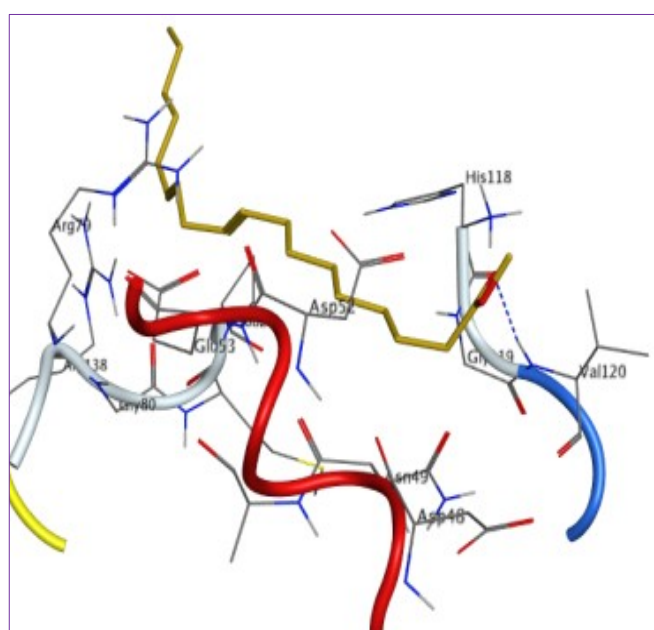
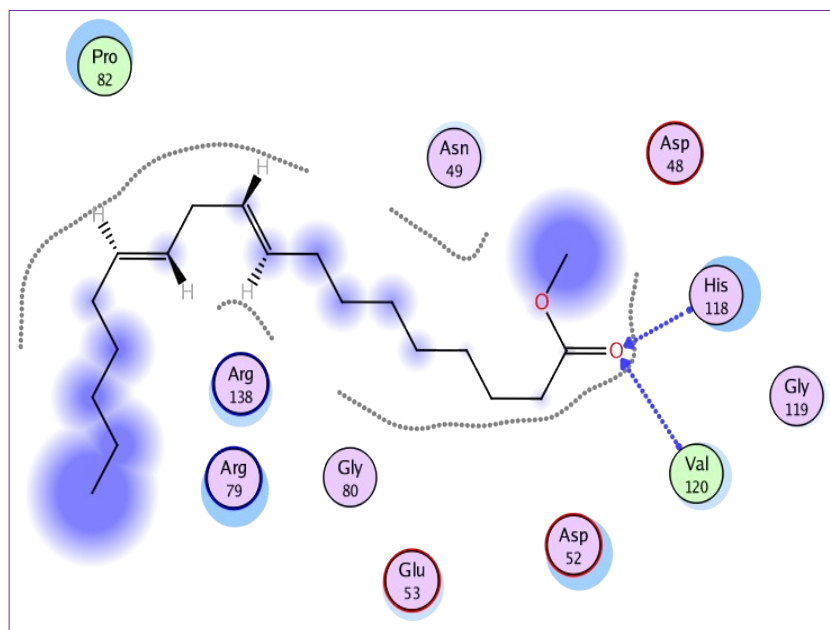




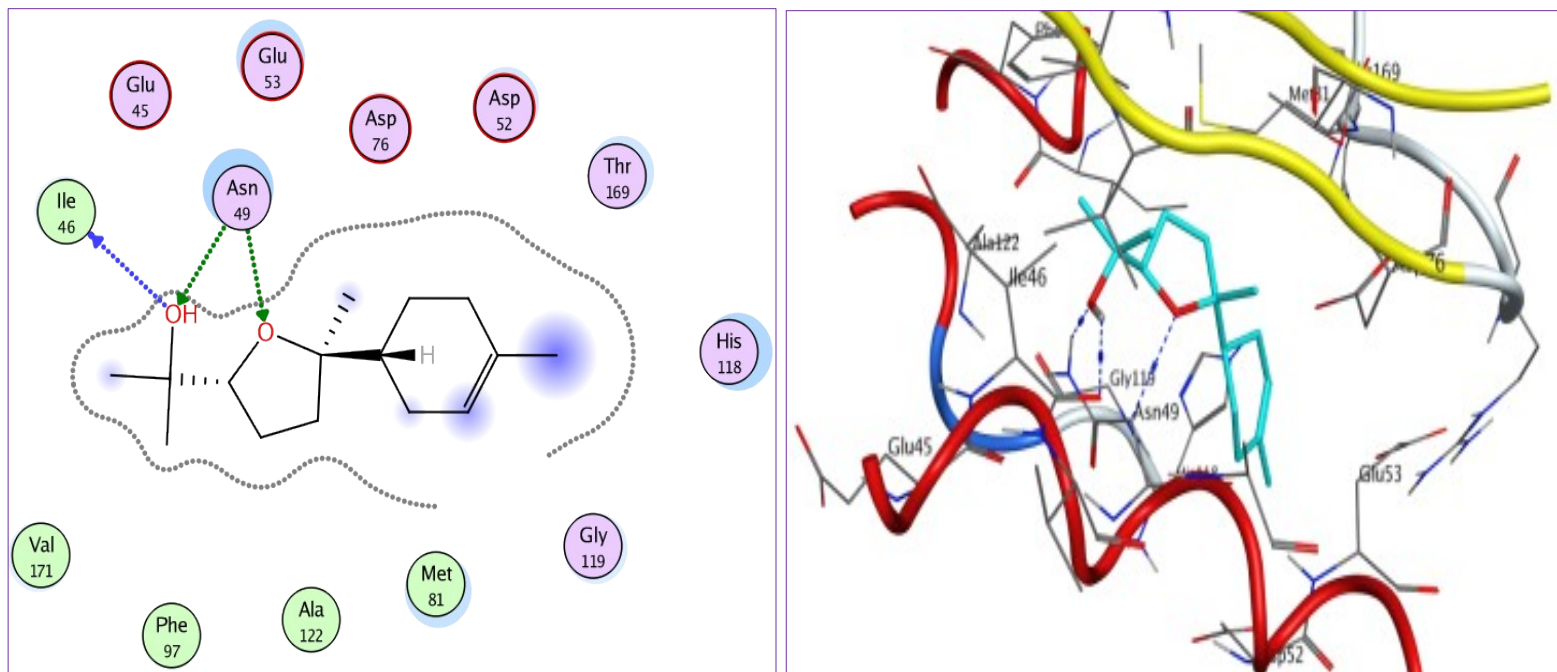
**Fig. 10S.** The two-dimensional and three-dimensional suggested binding modes of redocked ligand within the binding pocket of DNA gyrase B (PDB: 6F86).



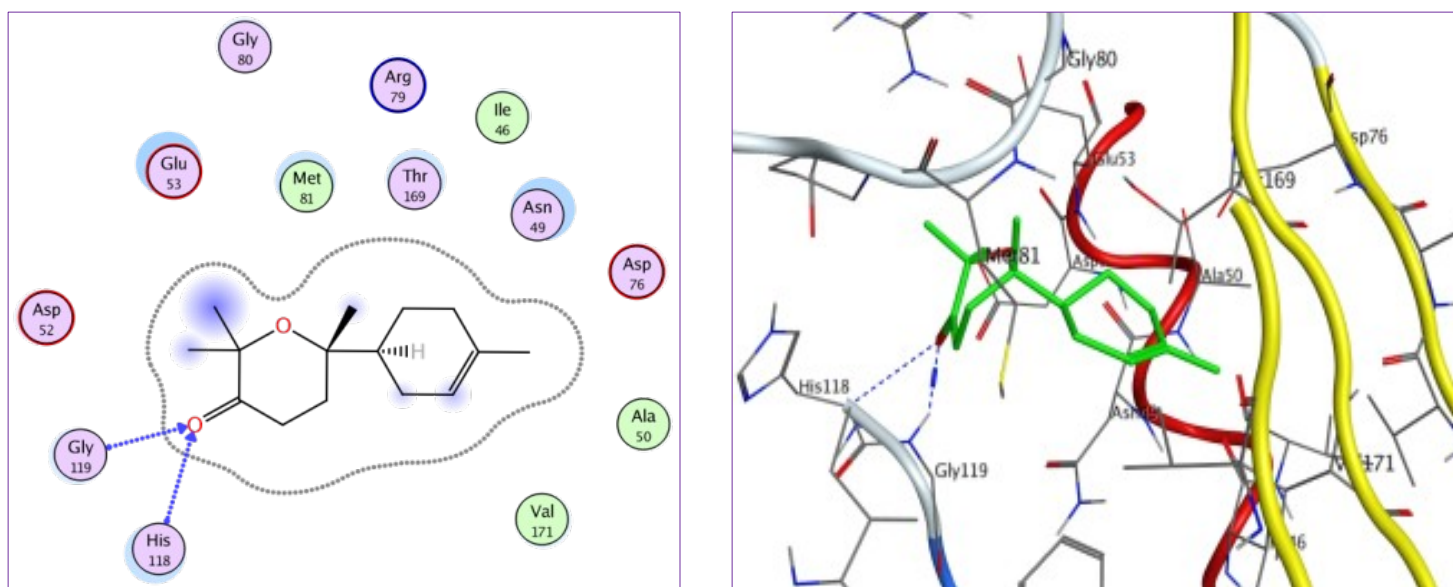
**Fig. 11S.** The two-dimensional and three-dimensional suggested binding modes of Bisabolol oxide A within the binding pocket of DNA topoisomerase IV subunit B (PDB: 4HZ5).



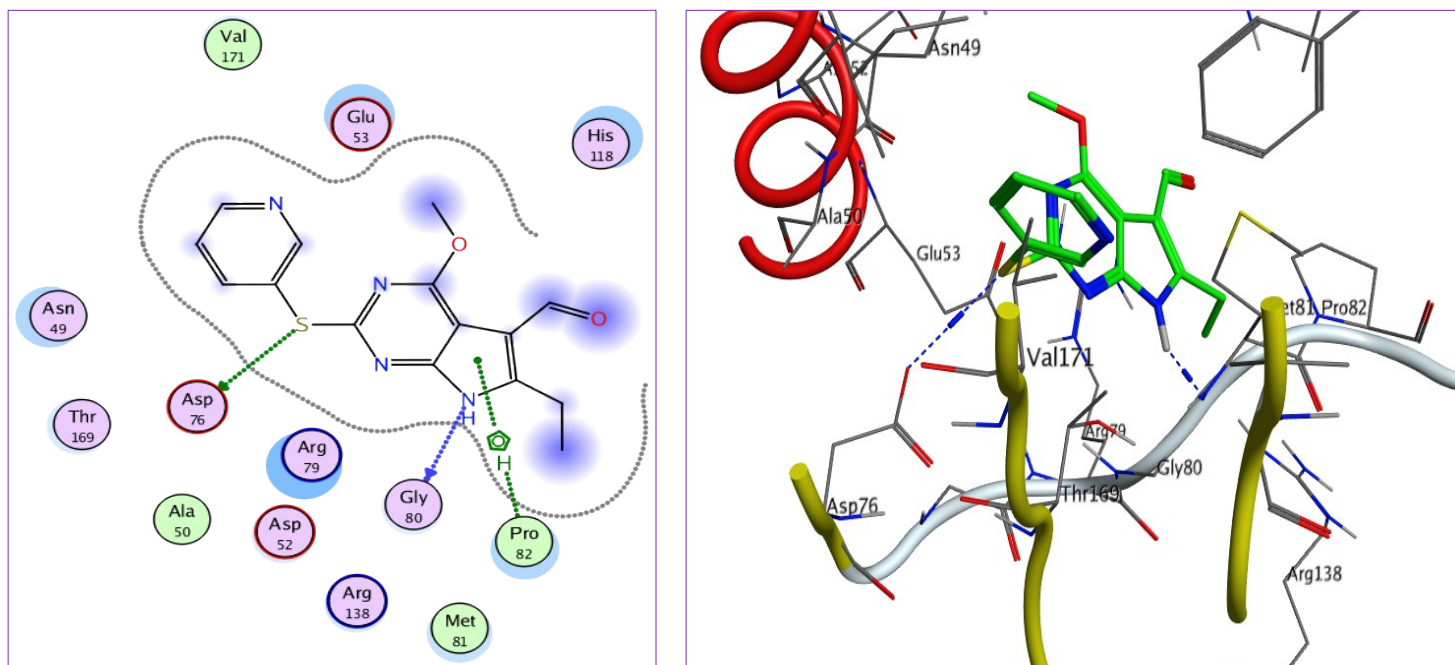
**Fig. 12S.** The two-dimensional and three-dimensional suggested binding modes of 9,12-Octadecadienoic acid, methyl ester within the binding pocket of DNA topoisomerase IV subunit B (PDB: 4HZ5).



**Fig. 13S.** The two-dimensional and three-dimensional suggested binding modes of  $\alpha$ -Bisabolol-oxide-B within the binding pocket of DNA topoisomerase IV subunit B (PDB: 4HZ5).



**Fig. 14S.** The two-dimensional and three-dimensional suggested binding modes of Bisabolone oxide within the binding pocket of DNA topoisomerase IV subunit B (PDB: 4HZ5).



**Fig. 15S.** The two-dimensional and three-dimensional suggested binding modes of redocked ligand within the binding pocket of DNA topoisomerase IV subunit B (PDB: 4HZ5).